

## ABSTRACT

A system includes a heat transfer system and a priming system coupled to the heat transfer system. The heat transfer system includes a main evaporator having a core, a primary wick, and a secondary wick, and a condenser coupled to the main evaporator by a liquid line and a vapor line. A heat transfer system loop is defined by the main evaporator, the condenser, the liquid line, and the vapor line. The priming system is configured to convert fluid into a liquid capable of wetting the primary wick of the main evaporator. The priming system includes a priming evaporator coupled to the vapor line, and a reservoir in fluid communication with the priming evaporator and coupled to the secondary wick of the main evaporator by a secondary fluid line.

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